UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,768	10/14/2003	Sachin Navin Chheda	200308767-1	3359

22879 7590 07/02/2009

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER	
REHMAN, MOHAMMED H	
ART UNIT	PAPER NUMBER
2116	

NOTIFICATION DATE	DELIVERY MODE
07/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
ipa.mail@hp.com
jessica.l.fusek@hp.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SACHIN NAVIN CHHEDA,
RICARDO ESPINOZA-IBARRA,
and ROBERT DOBBS

Appeal 2009-002104
Application 10/684,768
Technology Center 2100

Decided:[1] June 30, 2009

Before JOSEPH L. DIXON, ST. JOHN COURTENAY III, and
THU A. DANG, *Administrative Patent Judges.*

DIXON, *Administrative Patent Judge.*

DECISION ON APPEAL

---

[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

I. STATEMENT OF THE CASE

A Patent Examiner rejected claims 1-2, 9-10, and 12-13. Claims 19-28 are indicated to be allowed by the Examiner. Claims 3-8, 11, and 14-18 are indicated to be objected to by the Examiner. The Appellants appeal therefrom the rejected claims under 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Invention

The invention at issue on appeal relates to an electronic power switching mechanism disposed on a server card that could be inserted into a server chassis. The electronic power switching mechanism is configured to cause the three power states of the server card (Spec. 2).

Illustrative Claim

Claim 1, which further illustrates the invention, follows:

> 1. A server comprising:
>
> a server card that is removably insertable into a server chassis and comprising at least one of a blade server and a brick server; and
>
> an electronic switching mechanism disposed on the server card and configured to cause three power states of the server card including:
>
> a fully-operational state in which a system power of the server card is enabled and a standby power of the server card is enabled;

> a standby state in which the system power of the server card is disabled and the standby power of the server card is enabled; and
>
> a shutdown state in which the system power of the server card is disabled and the standby power of the server card is disabled.

References

The Examiner relies on the following reference as evidence.

Humpherys	US 6,226,699 B1	May 1, 2001 (filed June. 25, 1998)
Hensley	US 6,613,984 B1	Sep. 2, 2003 (filed Apr. 29, 2002)
Wierzbicki	US 6,789,206 B1	Sep. 7, 2004 (filed Sep. 29, 2000)
Dunstan	US 2004/0103345 A1	May 27, 2004 (filed Nov. 21, 2002)
Patel	US 7,126,821 B2	Oct. 24, 2006 (Nov. 16, 2004)

Rejections

Claims 1-2 and 12-13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Humpherys in view of Wierzbicki.

Claims 9-10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Humpherys in view of Wierzbicki and Dunstan.

II. ISSUE

Have Appellants shown that the Examiner erred in finding that the combination of Humpherys and Wierzbicki teaches or would have suggested

"a server card that is removably insertable into a server chassis and comprising at least one of a blade server and a brick server; and an electronic switching mechanism disposed on the server card and configured to cause three power states of the server card" as recited in claim 1?

III. PRINCIPLES OF LAW

Prima Facie Case of Unpatentability

The allocation of burdens requires that the USPTO produce the factual basis for its rejection of an application under 35 U.S.C. §§ 102 and 103. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016 (CCPA 1967)). The one who bears the initial burden of presenting a prima facie case of unpatentability is the Examiner. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Appellants have the opportunity on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

Claim Interpretation

During prosecution before the USPTO, claims are to be given their broadest reasonable interpretation, and the scope of a claim cannot be narrowed by reading disclosed limitations into the claim. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). The Office must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (citing *In re Bass*, 314 F.3d 575, 577 (Fed. Cir. 2002)).

"Giving claims their broadest reasonable construction 'serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.'" *Id.* (quoting *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984)). "Construing claims broadly during prosecution is not unfair to the applicant . . . because the applicant has the opportunity to amend the claims to obtain more precise claim coverage." *Id.*

Obviousness

In rejecting claims under 35 U.S.C. § 103, "[w]hat matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 419 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. *KSR*, 550 U.S. at 416.

IV. FINDINGS OF FACT

In our analysis *infra*, we rely on the following Findings of Fact (FF) that are supported by a preponderance of the evidence:

1. The Background section of Appellants' Specification provides the description of a "blade server":

> The next generation of high density computing introduced blade servers. In the blade server design, a chassis about the size of a single rack server holds a number of blade servers that are slidably inserted into the chassis. Each blade server is a card that carries basic server components such as central processing unit and memory. The chassis includes components common to all servers, such as power, cooling units, input/output circuitry, so that each blade server need not carry these bulkier components. With blade servers, a single blade chassis can carry as much computing power as would have been taken up by a six foot high set of rack servers.

(Spec. 1, ll. 13-21).

2. Appellants submit three references in Appendix regarding blade server technology (App. Br. 35, Evidence Appendix). One article mentions the height of a blade server and shared cooling systems:

> By comparison, the conventional approach for rack-mounted servers involves only one server per chassis. A chassis cannot be smaller than one vertical rack unit (1U, or about 1.75 inches high). This limits you to 42 to 48 severs in a standard seven-foot rack. *A typical blade chassis is much higher than 1U, but several can still be stacked in a rack*, allowing upwards of 300 servers per rack, depending on the vendor and configuration.

(Lamont Wood, *The Blade Server Debate*, Cutting Edge Server Farms (June 01, 2002) available at http://www.ddj.com/architect/184411655) (emphasis added).

Patel

3. Patel discloses "[a] new generation of such blades has a thickness of only 1U which corresponds to 1.75 inches or 4.445 cm." (Col. 1, ll. 24-26). Patel further discloses that "[s]uch a 1U server blade has advantage that it

uses only minimum space" (col. 2, ll. 37-38) and that "the ventilated casing 100 includes a high speed axial fan 110" (col. 2, ll. 46-46; Figs 1A and 1B).

Wierzbicki

4. Wierzbicki discloses that a server card (compute element 11) having a height ranged from 1-U to 4-U can be slid into a rack chassis (rack console 31) (Figs. 1 and 2; col. 5, l. 57 to col. 6, l. 26). Wierzbicki also discloses that the server card has a fan assembly 51 disposed in the chassis 13 (col. 7, ll. 6-7).

5. Wierzbicki still further discloses that "power button 53 is *freely programmable* so as to enable backlight 55 to provide backlighting of varying colors (i.e., green, red and/or amber colored light) at varying frequencies (i.e., solid light, 1 Hz blinking light, etc.)," (col. 7, ll. 35-39, emphasis added) and "in this application, *the primary function of backlight 55 is to provide means for indicating the particular power and operational state of compute element 11 in a manner required by industry promulgated, advanced configuration and power interface (ACPI) specification guidelines*" (col. 7, ll. 43-48, emphasis added).

6. Wierzbicki also discloses that front panel circuit board 83 is connected to an element controller 91 and "[*e*]*lement controller 91 is easily user programmable and primarily functions to control the power state of compute element 11, to control backlight 55 and display 57 of power button 53*" (col. 9, l. 62 to col. 10, l. 1, emphasis added).

7. Wierzbicki also discloses that "element controller 91 can be programmed to enable compute element 11 to *support industry promulgated*

operating system power management features and user interface control panel specification guidelines" (col. 10, ll. 6-9, emphasis added).

8. Wierzbicki also discloses that "compute element 11 is capable of operating at a *working power state, a sleeping power state, a hibernate power state, a soft off power state and a full off power state"* (col. 10, ll. 10-12, emphasis added; Fig. 9).

9. Detailed Description section of Appellants' Specification provides that

> [p]ower management module 203 controls power events for server card 12, such as enabling and disabling of system power to server card 12. Power management module 203 comprises operating system 62 and optionally *operates according to the Advanced Configuration Power Interface (ACPI) specification* (represented by module 64), which cooperates to ensure proper software and hardware coordination during power state changes.

(Spec. 7, ll. 22-27, emphasis added).

Humpherys

10. Humpherys discloses that "[t]he server management board 55 allows remote console operation of the server 10 . . . . [T]he server management board 55 has a battery backup power supply (not shown) to allow its continued operation in the event the server 10 loses power." (Col. 3, ll. 14-19).

Humpherys further discloses that

> [*t*]*o operate independently of the server 10, the server management board 55 isolates the microprocessor 80 from the PCI connector 70 in response to a loss of voltage from the server 10*. Again, this allows remote control and administration of the server 10 even if the server 10 loses power or ceases to operate properly.

(Col. 4, ll. 55-61, emphasis added).

V. ANALYSIS

From our review of the Examiner's stated rejections, we find the Examiner's showing sufficient to establish a prima facie case of obviousness. Therefore, we look to Appellants' Briefs to show error in the proffered prima facie case.

Section 103 rejection of claims 1-2 and 12-13

With respect to claims 1, Appellants contend that neither Humpherys nor Wierzbicki teaches a server card comprising at least one of a blade server and a brick server (App. Br. 9). Appellants further contend that Wierzbicki's computer element 11 is a rack server with the size 1U, 2U or 4U (*id.*). Appellants still further contend that Wierzbicki's computer element 11 contains bulkier components, such as fan assemblies 51. Appellants contend that Wierzbicki's computer element 11 is therefore a conventional rack server rather than a blade server that has shared fans (*id.* at 10).

The Examiner maintains that Appellants' definition of a blade server is unduly narrow and overly limiting regarding shared fans in the blade server. The Examiner cites Hensley and Patel to support his interpretation that Wierzbicki's computing element 11 would be a blade server. (Ans. 6-7).

We agree with the Examiner with respect to the interpretation of the blade server. First, we find that Appellants' Specification provides no express definition for the blade server, only a general description of the blade server (FF 1). Second, the height of a server, such as 1U or 2U, is not a deciding factor in determining whether or not the server is a blade server. Appellants do not provide any evidence regarding the height definition of a blade server (FF 2-3). Third, we find that in the references cited by both Appellants and the Examiner, there is no consistent definition with regard to the shared fans on the blade server (FF 1-3). This inconsistency identifies that there is no concrete definition of the blade server which we could recognize. As such, it is our reasoned view that the Examiner is entitled to give the argued limitation its broadest yet reasonable interpretation. Finally, we find that Wierzbicki's computer element 11 with height of 1U can be slid into a rack console (FF 4), which constitutes a server card comprising a blade server under the broadest but reasonable interpretation of the argued limitations.

Appellants also contend that Humpherys does not act to control the power of the server because Humpherys is directed to a bus isolation circuit for the loss of power or other faults of the server, which provides supplemental power to the remote server management board independent of the power state of the server. Appellants further contend that Humpherys fails to teach an electronic mechanism causing three different power states of a server card comprising one of a blade sever or brick server. (App. Br. 8-9; Reply Br. 5).

The Examiner maintains that "Humpherys discloses a server with a mechanism on a card that controls the power state of the card. This mechanism (150, 155) in the disclosed server (10) was relied upon in the rejection to meet the claim limitation" (Ans. 6), and "controlling power states of the server is not part of the claimed invention and thus does not constitute a pertinent argument." (*id.*).

We disagree with the Examiner's argument with respect to the server card and controlling the power states of a server. Appellants clearly recite in claim 1 that "a server card . . . comprising at least one of a blade server and a brick server" (App. Br. 23). Thus, it is clear that controlling the power states of a server card is indeed controlling the power states of the server comprised in/on the server card. We further find that Humpherys discloses that a server management board 55 operates independently of the server and has a battery backup that can automatically be activated when the server lost power (FF 10). Hence, we find that Humpherys does not teach controlling different power states of a server card/server.

Appellants still further contend that Wierzbicki does not disclose an electronic switching mechanism. In particular, the Appellants contend that "the Wierzbicki Patent fails to disclose an electronic switching mechanism controlling power states (fully operational, standby, and shutdown) in which a system power and a standby power are enabled, and disabled, respectively, in the respective power states" (App. Br. 12; *see also* Reply Br. 5).

The Examiner agrees with Appellants' contention, but maintains that "Humpherys is used to disclose that limitation." (Ans. 7). We disagree with

the Examiner. As already noted, Humpherys does not disclose controlling power states of a server (FF 10).

However, while we disagree with the Examiner's expressed findings, we find that Wierzbicki discloses an electronic switching mechanism comprising a programmable power button 53 (FF 5) and a programmable element controller 91, which are interrelated to control the power states of computer element 11, i.e., the server card (FF 6). Furthermore, we find that the arrangement of power states in Wierzbicki complies with advanced configuration and power interface (ACPI) specification guidelines (FF 5, 7) and the power states of the server in Wierzbicki controlled by the electronic switching mechanism include a working power state (a fully-operational state), a sleeping power state (a standby power state), and a full off power state (a shut down state) (FF 8). Moreover, we find that Appellants disclose that the arrangement of the power states in the instant invention is also in accordance with ACPI specification guidelines (FF 9). Thus, Wierzbicki's arrangement of power states includes the claimed limitations regarding the arrangement of power states because both Wierzbicki and Appellants arrange the power states in accordance with ACPI. Finally, giving the claim its broadest, yet reasonable interpretation, it is our reasoned conclusion that Wierzbicki, taken alone, teaches all limitations as required by the independent claim 1 because Wierzbicki teaches a server card comprising a blade server, all three different power states and the same power arrangements according to ACPI, as that of the instant invention.

Because Wierzbicki, taken alone, teaches all limitations of the independent claim 1, we conclude that the combination of Wierzbicki and

Humpherys teaches all the limitations set forth in independent claim 1. Accordingly, we need not reach Appellants' contention that the Examiner failed to articulate a convincing rationale for combining Humpherys and Wierzbicki. We conclude that the combined teachings of the two references render the claimed invention obvious.

Therefore, based on the record before us, we find Appellants have not shown the Examiner erred in determining that the cited prior art discloses "a server card that is removably insertable into a server chassis and comprising at least one of a blade server and a brick server; and an electronic switching mechanism disposed on the server card and configured to cause three power states of the server card" as required by claim 1.

Accordingly, we sustain the Examiner's rejection of representative claim 1 as being unpatentable over the combination of Humpherys and Wierzbicki under 35 U.S.C. § 103. Claims 2 and 12 depend from the independent claim 1 and fall therewith for the same reasons.

With respect to independent claim 13, it recites substantially the same limitations of independent claim 1, except requiring that the server card comprises at least one of a blade server and a brick server (App. Br. 27), and Appellants set forth similar arguments as argued with respect to independent claim 1. Since we did not find Appellants' arguments persuasive with respect to independent claim 1, we similarly find Appellants' arguments unpersuasive of error in the Examiner's initial showing of obviousness with respect to independent claim 13. Therefore, we sustain the Examiner's rejection of claim 13 as being unpatentable over the combination of Humpherys and Wierzbicki under 35 U.S.C. § 103.

Section 103 rejection of claims 9-10

With respect to claims 9 and 10, Appellants further contend that Dunstan fails to cure the deficiencies of the combination of Humpherys and Wierzbicki regarding independent claim 1, thus, the combination of Humpherys, Wierzbicki, and Dunstan fails to teach the claimed limitations of dependent claims 9 and 10. (App. Br. 21). Appellants rely upon the arguments for patentability advanced with respect to independent claim 1. Since we did not find Appellants' arguments persuasive with respect to independent claim 1, we similarly find Appellants' arguments unpersuasive of error in the Examiner's initial showing of obviousness with respect to dependent claims 9 and 10.

VI. CONCLUSION

For the aforementioned reasons, we conclude that Appellants have not shown that the Examiner erred finding that the proffered obviousness rejection teaches or would have suggested "a server card that is removably insertable into a server chassis and comprising at least one of a blade server and a brick server; and an electronic switching mechanism disposed on the server card and configured to cause three power states of the server card" as recited in claim 1. We also conclude that Appellants have not shown that the Examiner erred in his initial showing of the obviousness rejection with respect to claim 13.

VII. DECISION

We affirm the obviousness rejection of claims 1-2, 9-10, and 12-13.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

msc

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400